

ABSTRACT

A projection optical system comprises eight reflectors and forms a reduced image of a first surface (4) onto a second surface (7). It comprises a first reflective imaging optical system (G1) for forming an intermediate image of the first surface and a second reflective imaging optical system (G2) for forming an image of the intermediate image onto the second surface. The first reflective imaging optical system includes a first reflector (M1), a second reflector (M2) equipped with an aperture stop (AS), a third reflector (M3), and a fourth reflector (M4) successively as light enters from the first surface side. The second reflective imaging optical system includes a fifth reflector (M5), a sixth reflector (M6), a seventh reflector (M7), and an eighth reflector (M8) successively as light enters from the first surface side. This realizes a reflective projection optical system which can favorably correct aberrations while having a favorable reflection characteristic with respect to X-rays and keeping the reflectors from becoming bulky.